
Circuit card installation

Card slots—System options 21A, 21, 21E, 51, 51C, 61, 61C, 71, 81, and 81C

The following table in this chapter identifies card slot compatibility in the following modules:

- NT5D21 Core/Network Module
required for options 51C, 61C, and 81C
- NT5K11 Enhanced Existing Peripheral Equipment (EEPE) Module
- NT6D39 CPU/Network Module
required for options 51 and 61
- NT6D60 Core Module
required for option 81
- NT8D11 Common/Peripheral Equipment (CE/PE) Module
required for options 21A, 21, and 21E
- NT8D13 Peripheral Equipment (PE) Module
optional for options 21, 21E, 51, 51C, 61, 61C, 71, 81, and 81C
- NT8D34 CPU Module
required for option 71
- NT8D35 Network Module
required for options 71, 81, and 81C, optional for options 21, 21E, 51, 51C, 61, and 61C
- NT8D36 InterGroup Module
required for options 71, 81, and 81C
- NT8D37 Intelligent Peripheral Equipment (IPE) Module
required for options 51, 51C, 61, 61C, 71, 81, and 81C, optional for options 21 and 21E

- NT8D47 Remote Peripheral Equipment (RPE) Module
optional for options 21, 21E, 51, 51C, 61, 61C, 71, 81, and 81C
- NT9D11 Core/Network Module required for options 51C and 61C

System option 21A, 21, 21E, 51, 51C, 61, 61C, 71, 81, and 81C card slots (Part 1 of 13)

	21A	21	21E	51/61	51C/ 61C/81C	71	81
NT1P61 Fibre Superloop Network card	CE/PE: 4–9 (Net)	CE/PE: 4–9 (Net)	CE/PE: 4–9 (Net)	CPU/Net: 1–8	Core/Net: 0–7	Net: 5–12	Net: 5–12
NT1P62 Fibre Peripheral Controller card	—	IPE: “Contr”	IPE: “Contr”	IPE: “Contr”	IPE: “Contr”	IPE: “Contr”	IPE: “Contr”
NT1R52 Remote Carrier Interface	—	IPE: “Contr”	IPE: “Contr”	IPE: “Contr”	IPE: “Contr”	IPE: “Contr”	IPE: “Contr”
NT5D20 IOP/CMDU					Core/Net: 17. Except: see Note 1		Core: 16
NT1R20 Off-Premise Station	CE/PE: 0–9 (PE)	CE/PE: 0–9 (PE) IPE: all but “Contr”	CE/PE: 0–9 (PE) IPE: all but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”
NT4D18 Hybrid Bus Terminator					Core/Net: between 11 and 12		
NT4D19 and NT423 Hybrid Bus Terminator					Core/Net: between 0 and 1		
NT4D20 and NT422 Hybrid Bus Terminator					Core/Net: between 1 and 2		
NT5D11 and NT5D14 Line side T1 Line Card		IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”
NT5D12AA Dual DTI/PRI Card	—	CE/PE: 4–9 (Net)	CE/PE: 4–9 (Net)	CPU/Net: 1–8	Core/Net: 0–7	Net: 5–12	Net: 5–12

Note: All notes are displayed at the end of the table; see [page 16](#).

System option 21A, 21, 21E, 51, 51C, 61, 61C, 71, 81, and 81C card slots (Part 2 of 13)

	21A	21	21E	51/61	51C/ 61C/81C	71	81
NT5K02 Analog Line Card	CE/PE: 0–9 (PE)	CE/PE: 0–9 (PE) IPE: any slot but “Contr”	CE/PE: 0–9 (PE) IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”
NT5K07 Universal Trunk Card	CE/PE: 0–9 (PE)	CE/PE: 0–9 (PE) IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”
NT5K09 Quad Density Digitone Receiver	—	EEPE Slot 2 of section A or B at rear of module	EEPE Slot 2 of section A or B at rear of module	EEPE Slot 2 of section A or B at rear of module	EEPE Slot 2 of section A or B at rear of module	EEPE Slot 2 of section A or B at rear of module	EEPE Slot 2 of section A or B at rear of module
NT5K10 Dual Loop Buffer	—	NT5K10 Dual Loop Buffer	NT5K10 Dual Loop Buffer	NT5K10 Dual Loop Buffer	NT5K10 Dual Loop Buffer	NT5K10 Dual Loop Buffer	NT5K10 Dual Loop Buffer
NT5K12 Enhanced Peripheral Equipment Power Supply	—	NT5K12 EPE Power Supply	NT5K12 EPE Power Supply	NT5K12 EPE Power Supply	NT5K12 EPE Power Supply	NT5K12 EPE Power Supply	NT5K12 EPE Power Supply
NT5K17 Direct Dial Inward Trunk Card	CE/PE: 0–9 (PE)	CE/PE: 0–9 (PE) IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”
NT5K18 Central Office Trunk Card	CE/PE: 0–9 (PE)	CE/PE: 0–9 (PE) IPE: any slot but “Contr”	CE/PE: 0–9 (PE) IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”
NT5K19 E&M Trunk Card	CE/PE: 0–9 (PE)	CE/PE: 0–9 (PE) IPE: any slot but “Contr”	CE/PE: 0–9 (PE) IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”
Note: All notes are displayed at the end of the table; see page 16 .							

System option 21A, 21, 21E, 51, 51C, 61, 61C, 71, 81, and 81C card slots (Part 3 of 13)

	21A	21	21E	51/61	51C/ 61C/81C	71	81
NT5K36 Direct Inward/Direct Outward Dial Trunk Card	CE/PE: 0–9 (PE)	CE/PE: 0–9 (PE) IPE: any slot but “Contr”	CE/PE: 0–9 (PE) IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”
NT5K35 NT6D11AC D-Channel Handler Interface	—	PE: any slot but “DLB”	PE: any slot but “DLB”	PE: any slot but “DLB”	PE: any slot but “DLB”	PE: any slot but “DLB”	PE: any slot but “DLB”
NT5K70 Central Office Trunk Card	CE/PE: 0–9 (PE)	CE/PE: 0–9 (PE) IPE: any slot but “Contr”	CE/PE: 0–9 (PE) IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”
NT5K71 Central Office Trunk Card	CE/PE: 0–9 (PE)	CE/PE: 0–9 (PE) IPE: any slot but “Contr”	CE/PE: 0–9 (PE) IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”
NT5K72 E&M Trunk Card	CE/PE: 0–9 (PE)	CE/PE: 0–9 (PE) IPE: any slot but “Contr”	CE/PE: 0–9 (PE) IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”
NT5K82 Central Office Trunk Card	CE/PE: 0–9 (PE)	CE/PE: 0–9 (PE) IPE: any slot but “Contr”	CE/PE: 0–9 (PE) IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”
NT5K83 E&M Trunk Card	CE/PE: 0–9 (PE)	CE/PE: 0–9 (PE) IPE: any slot but “Contr”	CE/PE: 0–9 (PE) IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”
NT5K84 Direct Inward Dial Trunk Card	CE/PE: 0–9 (PE)	CE/PE: 0–9 (PE) IPE: any slot but “Contr”	CE/PE: 0–9 (PE) IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”

Note: All notes are displayed at the end of the table; see [page 16](#).

System option 21A, 21, 21E, 51, 51C, 61, 61C, 71, 81, and 81C card slots (Part 4 of 13)

	21A	21	21E	51/61	51C/ 61C/81C	71	81
NT5K90 Central Office Trunk Card	CE/PE: 0–9 (PE)	CE/PE: 0–9 (PE) IPE: any slot but “Contr”	CE/PE: 0–9 (PE) IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”
NT5K93 Central Office Trunk Card	CE/PE: 0–9 (PE)	CE/PE: 0–9 (PE) IPE: any slot but “Contr”	CE/PE: 0–9 (PE) IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”
NT5K96 Analog Line Card	CE/PE: 0–9 (PE)	CE/PE: 0–9 (PE) IPE: any slot but “Contr”	CE/PE: 0–9 (PE) IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”
NT5K99 Central Office Trunk Card	CE/PE: 0–9 (PE)	CE/PE: 0–9 (PE) IPE: any slot but “Contr”	CE/PE: 0–9 (PE) IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”
NT5K20 Extended Tone Detector	CE/PE: 0–9 (PE)	CE/PE: 0–9 (PE) IPE: any slot but “Contr”	CE/PE: 0–9 (PE) IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”
NT6D6003 Core Bus Terminator	—	—	—	—	Core/Net: 13 (only for NT9D11)	—	Core: 13
NT6D63 I/O Processor Card	—	—	—	—	Core/Net: 16 & 17 (only for NT9D11) see Note 2	—	Core: 16 & 17; see Note 2
NT6D64 Core Multi Drive Unit	—	—	—	—	Core/Net: 18 (only for NT9D11) see Note 2	—	Core: 18

Note: All notes are displayed at the end of the table; see [page 16](#).

System option 21A, 21, 21E, 51, 51C, 61, 61C, 71, 81, and 81C card slots (Part 5 of 13)

	21A	21	21E	51/61	51C/ 61C/81C	71	81
NT6D65 Core to Network Interface	—	—	—	—	51C/61C Core/Net: 12 81C Core/Net: 12–14	—	Core: 8-10
NT6D66 Call Processor Card	—	—	—	—	Core/Net: 15 & 16; except 14 & 15 for NT9D11 see Note 2 and Note 8 .	—	Core: 14 & 15; see Note 2 and Note 8 .
NT6D70 S/T Interface Line Card	—	—	CE/PE: 0–9 (PE) IPE: all but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”
NT6D71 U Interface Line Card	—	—	CE/PE: 0–9 (PE) IPE: all but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”
NT6D72 Basic Rate Signal Concentrator Card	—	—	CE/PE: 0–9 (PE) IPE: all but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”
NT6D73 Multi-purpose ISDN Signaling Processor Card	—	—	CE/PE: 4–9 (Net)	CPU/Net: 1–8	Core/Net: 0–7	Net: 5–12	Net: 5–12
NT6D80 MSDL	—	—	CE/PE: 4–9 (Net)	CPU/Net: 1–8, 13	Core/Net: 0–7	Net: 5–12	Net: 5–12
NT7D16 Data Access Card	CE/PE: 0–9 (PE); see Note 3	CE/PE: 0–9 (PE); see Note 3	CE/PE: 0–9 (PE); see Note 3	IPE: any slot but “Contr”; see Note 4	IPE: any slot but “Contr”	IPE: any slot but “Contr” see Note 4	IPE: any slot but “Contr” see Note 4
NT7R51 Local Carrier Interface	CE/PE: 4–9 (Net)	CE/PE: 4–9 (Net)	CE/PE: 4–9 (Net)	CPU/Net: 1–8	Core/Net: 0–7	Net: 5–12	Net: 5–12
Note: All notes are displayed at the end of the table; see page 16 .							

System option 21A, 21, 21E, 51, 51C, 61, 61C, 71, 81, and 81C card slots (Part 6 of 13)

	21A	21	21E	51/61	51C/ 61C/81C	71	81
NT8D01 Controller Card	—	IPE: “Contr”	IPE: “Contr”	IPE: “Contr”	IPE: “Contr”	IPE: “Contr”	IPE: “Contr”
NT8D02 Digital Line Card	CE/PE: 0–9 (PE)	CE/PE: 0–9 (PE) IPE: any slot but “Contr”	CE/PE: 0–9 (PE) IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”
NT8D03 Analog Line Card	CE/PE: 0–9 (PE)	CE/PE: 0–9 (PE) IPE: any slot but “Contr”	CE/PE: 0–9 (PE) IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”
NT8D04 Superloop Network Card	CE/PE: 4–9 (Net)	CE/PE: 4–9 (Net)	CE/PE: 4–9 (Net)	CPU/Net: 1–8	Core/Net: 0–7	Net: 5–12	Net: 5–12
NT8D09 Analog Message Waiting Line Card	CE/PE: 0–9 (PE)	CE/PE: 0–9 (PE) IPE: any slot but “Contr”	CE/PE: 0–9 (PE) IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”
NT8D14 Universal Trunk Card	CE/PE: 0–9 (PE)	CE/PE: 0–9 (PE) IPE: any slot but “Contr”	CE/PE: 0–9 (PE) IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”
NT8D15 E&M Trunk Card	CE/PE: 0–9 (PE)	CE/PE: 0–9 (PE) IPE: any slot but “Contr”	CE/PE: 0–9 (PE) IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”
NT8D16 Digitone Receiver Card	—	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”
NT8D17 Confer- ence/TDS Card	CE/PE: 4 (Net)	CE/PE: 4 (Net)	CE/PE: 4 (Net)	CPU/Net: 1–8	Core/Net: 0–7	Net: 5–12	Net: 5–12
NT8D18 Network/ DTR Card	CE/PE: 10 (Net)	CE/PE: 10 (Net)	CE/PE: 10 (Net)	—	—	—	—
Note: All notes are displayed at the end of the table; see page 16 .							

System option 21A, 21, 21E, 51, 51C, 61, 61C, 71, 81, and 81C card slots (Part 7 of 13)

	21A	21	21E	51/61	51C/ 61C/81C	71	81
NT8D19 Memory/ Peripheral Signaling Card	CE/PE: 3 (CPU/ Mem)	CE/PE: 3 (CPU/ Mem)	—	—	—	—	—
NT8D41 Dual Port SDI Paddle Board	CE/PE: any rear bkplane slot	CE/PE: any rear bkplane slot	CE/PE: any rear bkplane slot	CPU/Net: rear bkplane 7, 8, 12	Core/Net: 7 and 8	—	—
NT8D68 Floppy Disk Unit	CE/PE: any 2 slots	CE/PE: any 2 slots	—	CPU/Net: 18; see Note 2	—	—	—
NT8D69 Multi Disk Unit	—	—	—	CPU/Net: 18; see Note 5	—	CPU: 15–17; see Note 5	—
NT8D72 Primary Rate Interface Card	CE/PE: 4-8 (Net)	CE/PE: 4-8 (Net) Net: 5-11, 13-14 RPE: 1, 11-12	CE/PE: 4-8 (Net) Net: 5-11, 13-14 RPE: 1, 11-12	CPU/ Net: 3-7 Net: 5-11, 13-14 RPE: 1, 11-12	Core/Net: 0-7 Net: 5-11, 13-14 RPE: 1, 11-12	CPU: 8-12, 15-16 Net: 5-11, 13-14 RPE: 1, 11-12	Core: 0-3 Net: 5-11, 13-14 RPE: 1, 11-12
NT9D19 Call Processor card					Core/Net 15 & 16; see Note 2		Core: 14 & 15; see Note 2
NT9D33 Small System Multi Disk Unit	—	—	CE/PE: any 2 slots	—	—	—	—
NT9D34 Enhanced Mass Storage Interface Card	—	—	CE/PE: 1 (CPU/ Mem)	CPU/Net: 12	—	CPU: 7	—
NTAG03 Central Office Trunk Card	CE/PE: 0–9 (PE)	CE/PE: 0–9 (PE) IPE: any slot but “Contr”	CE/PE: 0–9 (PE) IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”
Note: All notes are displayed at the end of the table; see page 16 .							

System option 21A, 21, 21E, 51, 51C, 61, 61C, 71, 81, and 81C card slots (Part 8 of 13)

	21A	21	21E	51/61	51C/ 61C/81C	71	81
NTAG04 Central Office/Direct Inward Dial Trunk Card	CE/PE: 0–9 (PE)	CE/PE: 0–9 (PE) IPE: any slot but “Contr”	CE/PE: 0–9 (PE) IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”
NTBK51AA D-Channel Daughterboard	—	On any Dual DTI/ PRI card	On any Dual DTI/ PRI card	On any Dual DTI/ PRI card	On any Dual DTI/ PRI card	On any Dual DTI/ PRI card	On any Dual DTI/ PRI card
NTCK16 Generic Central Office Trunk Card	CE/PE: 0–9 (PE)	CE/PE: 0–9 (PE) IPE: any slot but “Contr”	CE/PE: 0–9 (PE) IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”	IPE: any slot but “Contr”
NTND01 Integrated CPU/ Memory Card	—	—	CE/PE: 2 (CPU/ Mem)	—	—	—	—
NTND02 Misc/SDI/ Peripheral Signaling Card	—	—	CE/PE: 3 (CPU/ Mem)	—	—	—	—
NTND09Bx 6 Mbyte Memory Card	—	—	—	CPU/Net: 17	—	CPU: 1–2; see Note 6	—
NTND09 Cx 12 Mbyte Memory Card	—	—	—	CPU/Net: 17	—	CPU: 2	—
NTND10 Changeover Memory Arbitrator Card	—	—	—	CPU/Net: 16	—	CPU: 3	—
NTND15 Floppy Disk Unit	—	—	CE/PE: any 2 slots	—	—	—	—
NTND16 Multi Disk Unit	—	—	—	CPU/Net: 18; see Note 5	—	CPU: 15–17; see Note 5	—
QPC43 Peripheral Signaling Card	—	—	—	CPU/Net: 10	Core/Net: 10	Net: 4	Net: 4
Note: All notes are displayed at the end of the table; see page 16 .							

System option 21A, 21, 21E, 51, 51C, 61, 61C, 71, 81, and 81C card slots (Part 9 of 13)

	21A	21	21E	51/61	51C/ 61C/81C	71	81
QPC62 1.5 Mbyte Converter Card	—	RPE: 2 and 9	RPE: 2 and 9	RPE: 2 and 9	RPE: 2 and 9	RPE: 2 and 9	RPE: 2 and 9
QPC63 Local Carrier Buffer Card	—	RPE: 5–6	RPE: 5–6	RPE: 5–6	RPE: 5–6	RPE: 5–6	RPE: 5–6
QPC65 Remote Peripheral Switch Card	—	RPE: 5–6	RPE: 5–6	RPE: 5–6	RPE: 5–6	RPE: 5–6	RPE: 5–6
QPC66 2 Mbyte Converter Card	—	RPE: 3 and 8	RPE: 3 and 8	RPE: 3 and 8	RPE: 3 and 8	RPE: 3 and 8	RPE: 3 and 8
QPC67 Carrier Maintenance Card	—	RPE: 10	RPE: 10	RPE: 10	RPE: 10	RPE: 10	RPE: 10
QPC71 E&M/DX Trunk Card	—	PE: any slot but "DLB"	PE: any slot but "DLB"	PE: any slot but "DLB"	PE: any slot but "DLB"	PE: any slot but "DLB"	PE: any slot but "DLB"
QPC99 Carrier Interface Card	—	RPE: 4 and 7	RPE: 4 and 7	RPE: 4 and 7	RPE: 4 and 7	RPE: 4 and 7	RPE: 4 and 7
QPC192 Off-Premises Extension Card	—	PE: any slot but "DLB"	PE: any slot but "DLB"	PE: any slot but "DLB"	PE: any slot but "DLB"	PE: any slot but "DLB"	PE: any slot but "DLB"
QPC215 Segmented Bus Extender Card	—	—	—	—	—	CPU: 8–12	—
QPC237 4-Wire E&M/DX Trunk Card	—	PE: any slot but "DLB"	PE: any slot but "DLB"	PE: any slot but "DLB"	PE: any slot but "DLB"	PE: any slot but "DLB"	PE: any slot but "DLB"
QPC250 Release Link Trunk Card	—	PE: any slot but "DLB"	PE: any slot but "DLB"	PE: any slot but "DLB"	PE: any slot but "DLB"	PE: any slot but "DLB"	PE: any slot but "DLB"
QPC297 Attendant Console Monitor Card	—	PE: any slot but "DLB"	PE: any slot but "DLB"	PE: any slot but "DLB"	PE: any slot but "DLB"	PE: any slot but "DLB"	PE: any slot but "DLB"
QPC412 InterGroup Switch Card	—	—	—	—	81C only: Core/Net: 8, 9	Net: 2, 3	Net: 2, 3
Note: All notes are displayed at the end of the table; see page 16 .							

System option 21A, 21, 21E, 51, 51C, 61, 61C, 71, 81, and 81C card slots (Part 10 of 13)

	21A	21	21E	51/61	51C/ 61C/81C	71	81
QPC414 Network Card	CE/PE 4–9 (Net)	CE/PE: 4–9 (Net)	CE/PE: 4–9 (Net)	CPU/Net: 1–8	Core/Net: 0–7	Net: 5–12	Net: 5–12
QPC422 Tone Detector Card	—	PE: any slot but “DLB”	PE: any slot but “DLB”	PE: any slot but “DLB”	PE: any slot but “DLB”	PE: any slot but “DLB”	PE: any slot but “DLB”
QPC430 Asynchronous Interface Line Card	—	PE: any slot but “DLB”	PE: any slot but “DLB”	PE: any slot but “DLB”	PE: any slot but “DLB”	PE: any slot but “DLB”	PE: any slot but “DLB”
QPC432 4-Port Data Line Card	—	PE: any slot but “DLB”	PE: any slot but “DLB”	PE: any slot but “DLB”	PE: any slot but “DLB”	PE: any slot but “DLB”	PE: any slot but “DLB”
QPC441 3-Port Extender Card	—	—	—	CPU/Net: 11	Core/Net: 11	Net: 1	Core: 7 Net: 1
QPC449 Loop Signaling Trunk Card	—	PE: any slot but “DLB”	PE: any slot but “DLB”	PE: any slot but “DLB”	PE: any slot but “DLB”	PE: any slot but “DLB”	PE: any slot but “DLB”
QPC450 CO/FX/WATS Trunk Card	—	PE: any slot but “DLB”	PE: any slot but “DLB”	PE: any slot but “DLB”	PE: any slot but “DLB”	PE: any slot but “DLB”	PE: any slot but “DLB”
QPC471 Clock Controller Card	CE/PE: 4–7 (Net)	CE/PE: 4–7 (Net)	CE/PE: 4–7 (Net)	CPU/Net: 9	51C/61C Core/Net: 9 For 81C: see Note 7	CPU: 14	Core: 6
QPC477 Bus Terminating Units: QPC477A9	—	—	—	CPU/Net: 2/3	Core/Net: 0/1 only in NT9D11	Net: 11/12	Core: 4/5 Net: 11/12
QPC477B10 (replaces A10)	—	—	—	CPU/Net: 1/2	Core/Net: 1/2 only in NT9D11	Net: 12/13	Core: 5/6 Net: 12/13
QPC477A20 Bus Terminating Unit	—	—	—	—	—	CPU: 13/14	—
QPC477A21 Bus Terminating Unit	—	—	—	—	—	CPU: 13/14	—
Note: All notes are displayed at the end of the table; see page 16 .							

System option 21A, 21, 21E, 51, 51C, 61, 61C, 71, 81, and 81C card slots (Part 11 of 13)

	21A	21	21E	51/61	51C/ 61C/81C	71	81
QPC477A22 Bus Terminating Unit	—	—	—	CPU/Net: 12/13	—	—	—
QPC513 Enhanced Serial Data Interface Card	CE/PE: 4–9 (Net)	CE/PE: 4–9 (Net)	CE/PE: 4–9 (Net)	CPU/Net: 1–9, 13	Core/Net: 9, 13	CPU: 6, 13 Net: 5–13	Core: 6, 13 Net: 5–13
QPC578 Integrated Services Digital Line Card	—	PE: any slot but “DLB”	PE: any slot but “DLB”	PE: any slot but “DLB”	PE: any slot but “DLB”	PE: any slot but “DLB”	PE: any slot but “DLB”
QPC579 CPU Function Card	—	—	—	CPU/Net: 14	—	CPU: 5	—
QPC580 CPU Interface Card	—	—	—	CPU/Net:1 5	—	CPU: 4	—
QPC581 Changeover Memory Arbitrator Card	—	—	—	CPU/Net: 16	—	CPU: 3	—
QPC583 Memory Card	—	—	—	CPU/Net: 17	—	CPU: 1–2	—
QPC584 Mass Storage Interface Card	—	—	—	CPU/Net: 12	—	CPU: 7	—
QPC594 16-Port 500/2500 Line Card	—	PE: any slot but “DLB”	PE: any slot but “DLB”	PE: any slot but “DLB”	PE: any slot but “DLB”	PE: any slot but “DLB”	PE: any slot but “DLB”
QPC659 Dual Loop Peripheral Buffer Card	—	PE: “DLB”	PE: “DLB”	PE: “DLB”	PE: “DLB”	PE: “DLB”	PE: “DLB”
QPC687 CPU Card	CE/PE: 2 (CPU/ Mem)	CE/PE: 2 (CPU/ Mem)	—	—	—	—	—
Note: All notes are displayed at the end of the table; see page 16 .							

System option 21A, 21, 21E, 51, 51C, 61, 61C, 71, 81, and 81C card slots (Part 12 of 13)

	21A	21	21E	51/61	51C/ 61C/81C	71	81
QPC720 Primary Rate Interface Card	CE/PE: 4–8 (Net)	CE/PE: 4–8 (Net) Net: 5–11, 13–14 RPE: 1, 11–12	CE/PE: 4–8 (Net) Net: 5–11, 13–14 RPE: 1, 11–12	CPU/Net: 3–7 Net: 5–11, 13–14 RPE: 1, 11–12	Core/Net: 0–7 Net: 5–11, 13–14 RPE: 1, 11–12	CPU: 8–12, 15–16 Net: 5–11, 13–14 RPE: 1, 11–12	Core: 0–3 Net: 5–11, 13–14 RPE: 1, 11–12
QPC723 RS-232 4-Port Interface Line Card	—	PE: any slot but “DLB”	PE: any slot but “DLB”	PE: any slot but “DLB”	PE: any slot but “DLB”	PE: any slot but “DLB”	PE: any slot but “DLB”
QPC742 Floppy Disk Interface Card	CE/PE: 1 (CPU/Mem)	CE/PE: 1 (CPU/Mem)	CE/PE: 1 (CPU/Mem)	CPU/Net: 12	—	—	—
QPC757 D-Channel Handler Interface Card	—	CE/PE: 4–9 (Net)	CE/PE: 4–9 (Net)	CPU/Net: 1–9, 13	PE: any slot but “DLB”	Net: 5–13	Net: 5–13
QPC775 Clock Controller	CE/PE: 4–7 in Net area	CE/PE: 4–7 in Net area	CE/PE: 4–7 in Net area	CPU/Net: 9	51C/61C Core/Net: slot 14. For 81C: see Note 7	CPU: 14	Core: 14
QPC789 16-Port 500/2500 (Message Waiting) Line Card	—	PE: any slot but “DLB”	PE: any slot but “DLB”	PE: any slot but “DLB”	PE: any slot but “DLB”	PE: any slot but “DLB”	PE: any slot but “DLB”
QPC841 4-Port Serial Data Interface Card	CE/PE: 4–9 (Net)	CE/PE: 4–9 (Net)	CE/PE: 4–9 (Net)	CPU/Net: 1–9, 13	Core/Net: 0–7	Core: None Net: 5–13	Core/Net: 0–7 Net: 5–13
QPC918 High-Speed Data Card	—	PE: any slot but “DLB”	PE: any slot but “DLB”	PE: any slot but “DLB”	PE: any slot but “DLB”	PE: any slot but “DLB”	PE: any slot but “DLB”
Note: All notes are displayed at the end of the table; see page 16 .							

System option 21A, 21, 21E, 51, 51C, 61, 61C, 71, 81, and 81C card slots (Part 13 of 13)

	21A	21	21E	51/61	51C/ 61C/81C	71	81
Note 1: In option 61C with NT9D11, use slot 16. Note 2: The card occupies two slots. Note 3: This applies to NT8D11BC or NT8D11EC, CE/PE Modules. In NT8D11AC or NT8D11DC modules, use only slot 0. Note 4: This applies to NT8D37BA or NT8D37EC IPE Modules. In NT8D37AA or NT8D37DC modules, use only slots 0, 4, 8, and 12. Note 5: This card requires three slots. Note 6: If only one NTND09 card is used, install it in slot 2 (next to the CMA card). Note 7: In option 81C, use NT8D35 Net slot 13; in QSD39 shelf, use Net slot 2; in QSD40 shelf, use slot 13. Note 8: In option 81 or 81C, do not use this card for X11 Release 22. Note: All notes are displayed at the end of the table; see page 16.							

Precautions

To avoid personal injury and equipment damage, review the following guidelines before handling Meridian 1 equipment.

WARNING

Module covers are not hinged; do not let go of the covers. Lift covers away from the module and set them out of your work area.

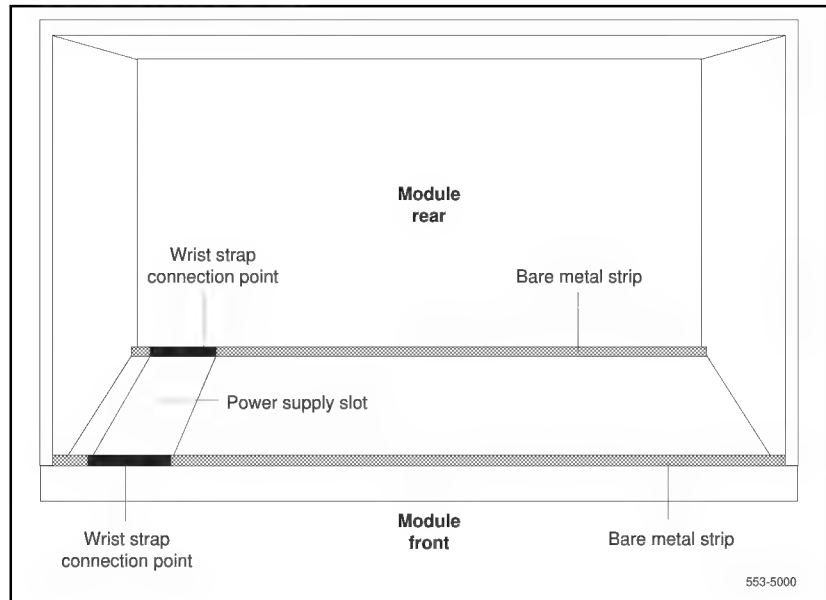
WARNING

Circuit cards may contain a lithium battery. There is a danger of explosion if the battery is incorrectly replaced. Do not replace components on any circuit card; you must replace the entire card.

Dispose of circuit cards according to the manufacturer's instructions.

To avoid damage to circuit cards from static discharge, wear a properly connected antistatic wrist strap when you work on Meridian 1 equipment. If a wrist strap is not available, regularly touch one of the bare metal strips in a module to discharge static. [Figure 1](#) shows the recommended connection points for the wrist strap and the bare metal strips you should touch.

Figure 1
Static discharge points



Handle circuit cards as follows:

- Unpack or handle cards away from electric motors, transformers, or similar machinery.
- Handle cards by the edges only. Do not touch the contacts or components.
- Set cards on a protective antistatic bag. If an antistatic bag is not available, hand-hold the card, or set it in a card cage unseated from the connectors.
- Store cards in protective packing. Do not stack cards on top of each other unless they are packaged.
- Keep cards installed in the system as much as possible to avoid dirty contacts and unnecessary wear.
- Store cards in a cool, dry, dust-free area.

During repair and maintenance procedures do the following:

- Turn off the circuit breaker or switch for a module power supply before the power supply is removed or inserted.

Note: In AC-powered systems, capacitors in the power supply must discharge. Wait five full minutes between turning off the circuit breaker and removing the power supply from the module.

- Software disable cards, if applicable, before they are removed or inserted.
- Hardware disable cards, whenever there is an enable/disable switch, before they are removed or inserted.
- Return defective or heavily contaminated cards to a repair center. Do not try to repair or clean them.

Installing a circuit card

This procedure provides detailed installation instructions for Meridian 1 circuit cards.

WARNING

To avoid personal injury and equipment damage, read all of the guidelines in **“Precautions” on page 17** before you begin installation and follow all guidelines throughout the procedure.

Procedure 1 Installation

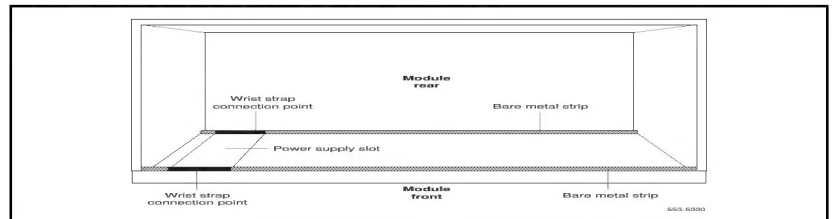
- 1** Open the protective carton and remove the circuit card from the antistatic bag. Return the antistatic bag to the carton and store it for future use.
- 2** Inspect the card components, faceplate, locking devices, and connectors for damage. If damaged, tag the card with a description of the problem and package it for return to a repair center.
- 3** Refer to the work order to determine the module and slot location for the card.
- 4** If there is an enable/disable (Enb/Dis) switch on the faceplate, set it to Dis.
- 5** If there are option switches or jumpers on the card, set them according to the work order (see “Option settings” on page 35).

CAUTION

Incorrectly set switches on common equipment circuit cards may cause a system failure.

- 6** If you are installing an NTND02 Misc/SDI/Peripheral Signaling (MSPS) Card, the A0378252 Battery Pack Assembly must be attached:
- Position the battery pack on the component side of the MSPS card. From the back of the card, install the screws that secure the battery pack.
 - On the component side of the MSPS card, plug in the clip connector wired to the battery pack. Make sure the connector key is centered on J2 (see [Figure 2](#)).
- Note:** The battery will not be fully charged until 24 hours after installation in a powered system.

Figure 2
Connector for the battery pack assembly



- 7** If you are installing one of the following cards, the QMM42 Security Data Cartridge must be attached:
- NT6D63 I/O Processor (IOP) Card
 - QPC584 Mass Storage Interface (MSI) Card
 - NT9D34 Enhanced Mass Storage Interface (EMSI) Card
 - QPC742 Floppy Disk Interface (FDI) Card
- To install a data cartridge, plug it into the connectors on the component side of the host card and install the screw that secures the data cartridge.

CAUTION

To avoid system failure, the ID number on the data cartridge must match the ID number on the system software diskettes.

- 8 If you are installing one of the following cards, the associated ROM card must be attached:
- NTND01 Integrated CPU/Memory (ICM) Card—NTND31 ROM
 - QPC579 CPU Function (FN) Card—NTND08 or QPC939 ROM
 - QPC687 CPU Card—QPC940 ROM

To install a ROM card, plug it into the connectors on the component side of the host card.

Note: For the NTND31 ROM Card, you must also install a screw and washer at each corner of the ROM card.

CAUTION

When you install a ROM card, do not touch other components on the host card.

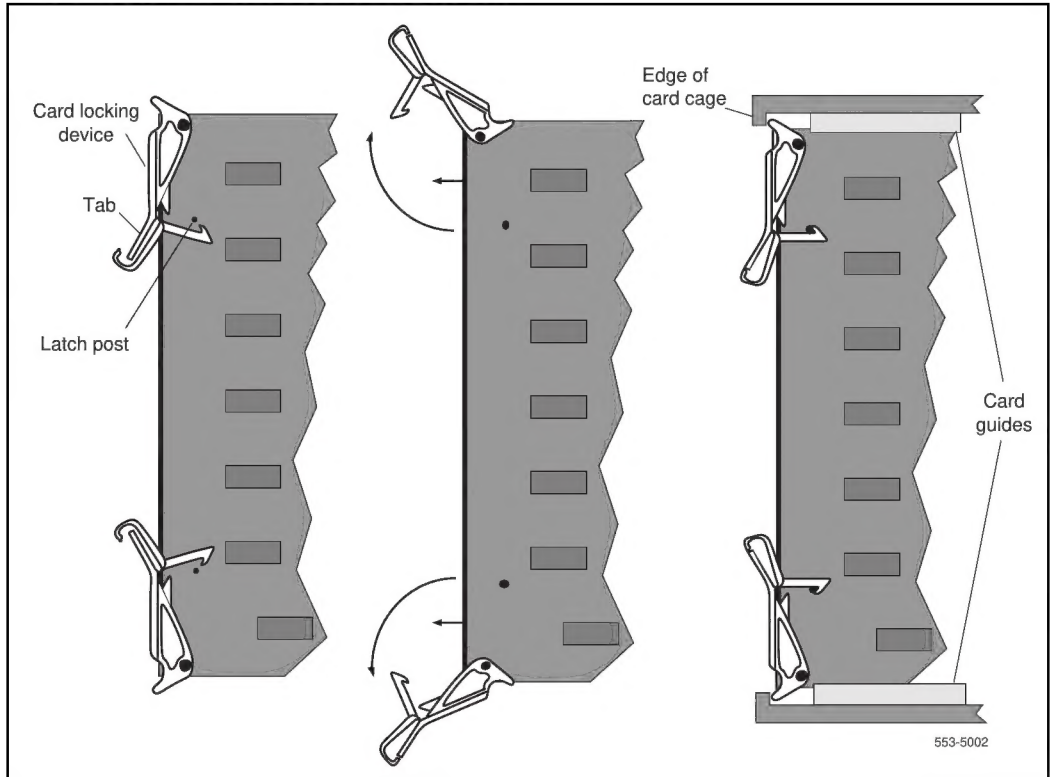
- 9 Squeeze the ends of the locking devices on the card and pull the tabs away from the latch posts and faceplate (see [Figure 3](#)).
- 10 Insert the card into the card aligning guides in the card cage. Gently push the card into the slot until you feel resistance. The tip of the locking device must be behind the edge of the card cage (see [Figure 3](#)).
- 11 Lock the card into position by simultaneously pushing the ends of the locking devices against the faceplate.

Note: When IPE cards are installed, the red LED on the faceplate remains lit for two to five seconds as a self-test runs. If the self-test completes successfully, the LED flashes three times and remains lit until the card is configured and enabled in software, then the LED goes out. If the LED does not follow the pattern described or operates in any other manner (such as continually flashing or remaining weakly lit), replace the card.

- 12 If there is an enable/disable switch, set it to Enb.

Note: Do not enable the switch on an NT8D04 Superloop Network Card or QPC414 Network Card until network loop cables are installed.

Figure 3
Installing the circuit card in the card cage



- 13** If you are adding a voice, conference, or tone and digit loop, press the manual initialize (Man Int) button if the card is associated with the active CPU:
- In options 21A and 21, the manual initialize button is on the NT8D19 Memory/Peripheral Signaling Card.
 - In option 21E, the manual initialize button is on the NTND01 Integrated CPU/Memory (ICM) Card.
 - In options 51, 61, and 71, the manual initialize button is on the QPC580 CPU Interface Card.
 - In options 51C, 61C, 81, and 81C, the manual initialize button is on the NT6D66 Call Processor (CP) Card.
- Note:** An initialization causes a momentary interruption in call processing.
- 14** If you are installing the card in a working system, refer to the work order and the *X11 input/output guide* to add the required office data to the system memory.
- 15** Go to the appropriate test procedure in "Acceptance tests" on page 25.